



Environmental Technology Partnerships

Drinking Water
Contamination

U.S. Environmental
Protection Agency

Office of Research and Development
Washington, DC 20460

EPA/600/F-94/019
September 1994

Stem 431-J-15

Cooperative Research and Development Agreement With George H. Drysdale & Associates, Inc.

The Development and Application of Automated and Remote Control Telemetry for Drinking Water Package Plants

Participants

This Cooperative Research and Development Agreement (CRADA) brings together George H. Drysdale & Associates, Inc., and the U.S. Environmental Protection Agency's (EPA) Risk Reduction Engineering Laboratory (RREL) in the Office of Environmental Engineering and Technology Demonstration, Office of Research and Development.

Purpose

To integrate into one product process control equipment, water quality sensors, communication software, and data storage equipment for drinking water package plants treating contaminated water.

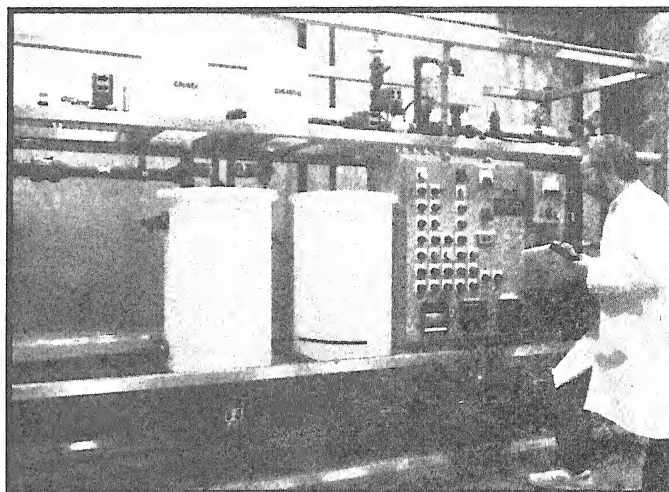
Background

Package plants are factory built, skid mounted drinking water treatment units that are being proposed as possible low-cost solutions for small community and non-community drinking water systems.

There are approximately 50,000 small community systems in the U.S. accounting for over 25 million people. An essential element to bringing these small systems into compliance is the automatic operation and remote monitoring and control. Package plants will be located at the U.S. EPA's Test and Evaluation (T&E) Facility in Cincinnati, OH, and the purpose of this CRADA is to apply hardware and software to those plants for automated and remote control.

A package plant provided by the RREL will treat and operate in a manner simulating actual field conditions. The plant will be evaluated for their ability to provide comparisons will be made between manual and unit processes separately.

The automatic water-quality-parameter sensors, process control hardware and software will be adapted by George H. Drysdale & Associates, Inc., to the plant. Over the course of the research at the T&E Facility, several different package plants will be evaluated.



Ultrafiltration Drinking Water Treatment Package Plant at U.S. EPA's Test & Evaluation Facility in Cincinnati, OH

Results

The package plant has been evaluated and is operating well in the "local" mode. Software has been modified to accept the plant operating requirements. Hardware has been configured to match the package plant. The new communication system has been installed at the T&E Facility which will be used to link the plant at the Facility with a remote P.C.

The final task will be to operate the package plant in the "remote" mode. This will allow RREL and George H. Drysdale & Associates to control data treatment technology and record data to ensure compliance with environmental regulations.

This is one of more than 50 cooperative research and development agreements EPA has with various U.S. businesses, academic institutions and state and local governments under the Federal Technology Transfer Act of 1986. These agreements serve as a mechanism for the federal government to work with private industry and others to develop new



Printed on Recycled Paper

pollution prevention and control technologies and efficiently bring them into the marketplace.

Contacts

L. Terry Clausing
Project Manager
& Principal Investigator
George H. Drysdale & Associates, Inc.
P.O. Box 44055
Cincinnati, OH 45255-0055
Phone: (513) 831-9625
FAX: (513) 831-9626

James A. Goodrich
Environmental Scientist
U.S. EPA/RREL
26 W. Martin Luther King Drive
Cincinnati, OH 45268
Phone: (513) 569-7605
FAX: (513) 569-7185

John J. Convery
Technology Transfer Coordinator
& Deputy Director
U.S. EPA/RREL
26 W. Martin Luther King Drive
Cincinnati, OH 45268
Phone: (513) 569-7896
FAX: (513) 569-7680

Jane E. Ice
Technology Transfer Specialist
U.S. EPA/ORD
Office of Science, Planning, and Regulatory Evaluation
5 West Martin Luther King Drive
Cincinnati, OH 45268
(513) 569-7311
(513) 569-7132

Vendors Represented by Drysdale

Bret Wiscomb
TSR
Process Control and Data Acquisition Systems
Software & Engineering
330 West 500 South
Salt Lake City, UT 84101
Phone: (801) 363-6051
FAX: (801) 531-0345

Jack Welsand
ACROMAG
Signal Conditioning
30765 Wixom Road
Wixom, MI 48096
Phone: (313) 624-1541
FAX: (313) 624-9234